

Report No.:

Test Time: 2022/8/30 09:54

Luminaire Property

Luminaire Manufacturer:

Luminaire Category: PPNW23030MMBK

Lamp Catalog: B SIDE

Luminous Width (mm): 24

Voltage: 24.0 V

Power: 22.91 W

Luminaire Description: PPNW23030MMBK

Luminous Length (mm): 610

Luminous Height (mm): 100

Current: 0.955 A

Power Factor: 1.000

Photometric Results

CIE Class: Direct

Measurement Flux: 776.5 lm

Downward Ratio: 99%

Horizontal Diffuse Angle(10%,50%): H151.2,H98.1

Vertical Diffuse Angle(10%,50%): V156.7,V103.7

Luminaire Efficacy Rating (LER): 34

Max. Intensity: 311.96 cd

Total Rated Lamp Lumens: 776.5 lm

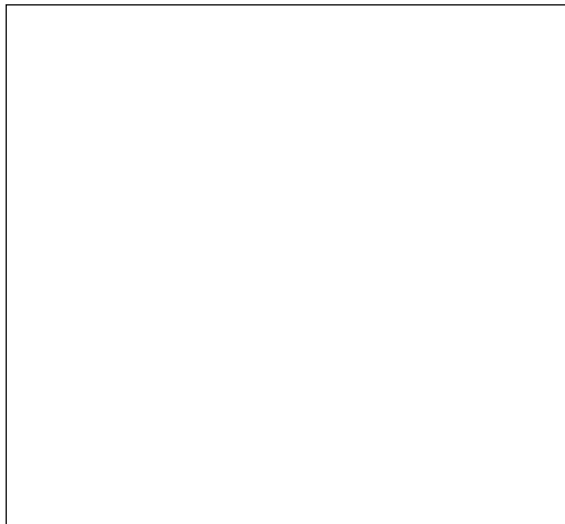
Efficiency: 100%

Upward Ratio: 1%

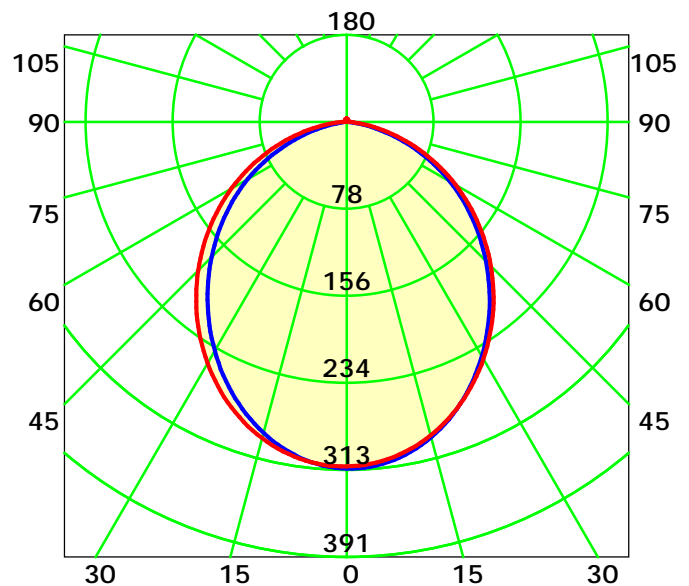
Central Intensity: 311.91 cd

Pos of Max. Intensity: H0 V1

Picture Of Luminaire



Luminous Intensity Distribution Curve



Average Diffuse Angle(50%): 100.9° Unit: cd

— C0-C180 — C90-C270

C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Jacky

Gamma Plane (°):0.0-180.0: 1.0

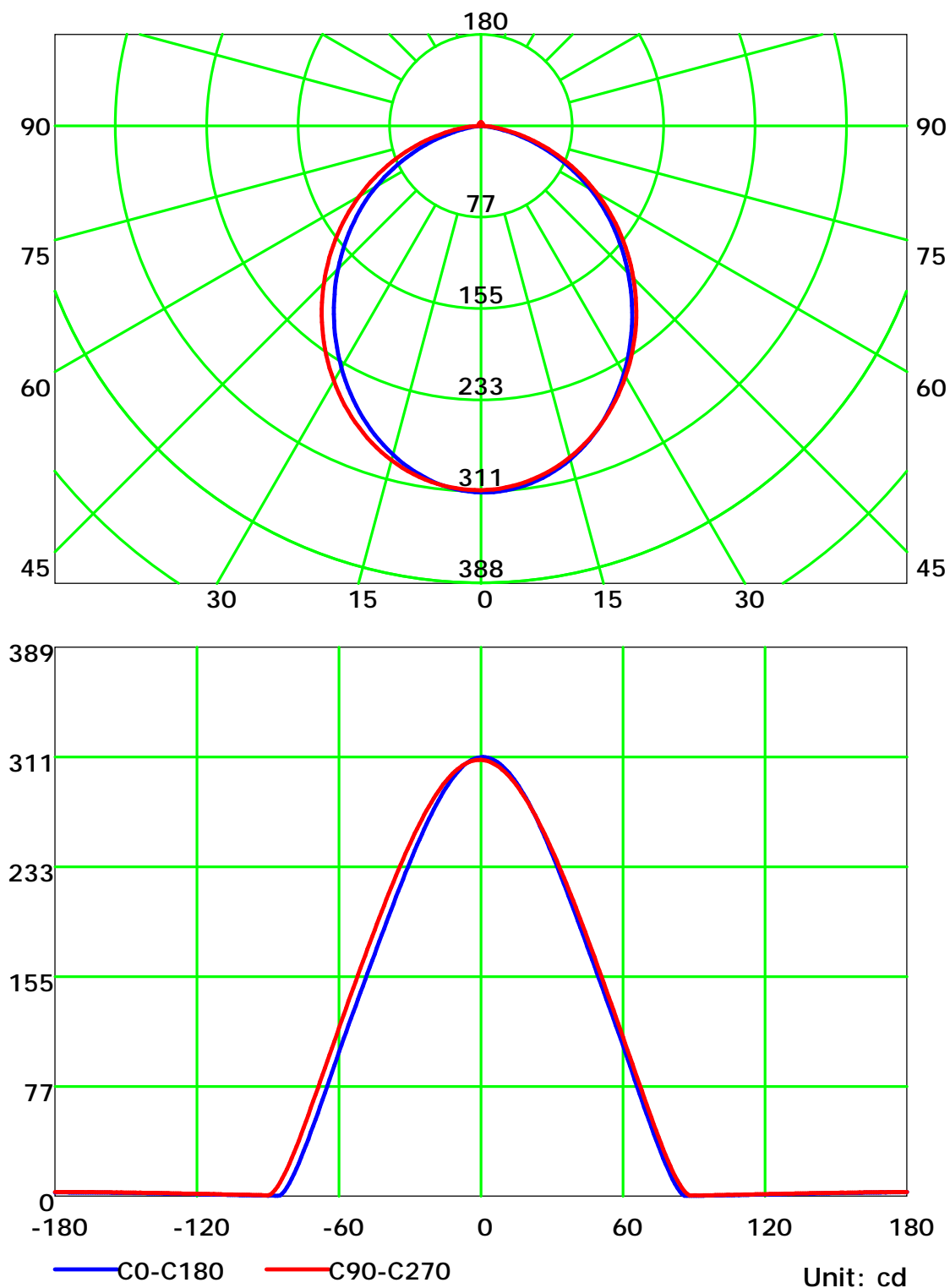
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

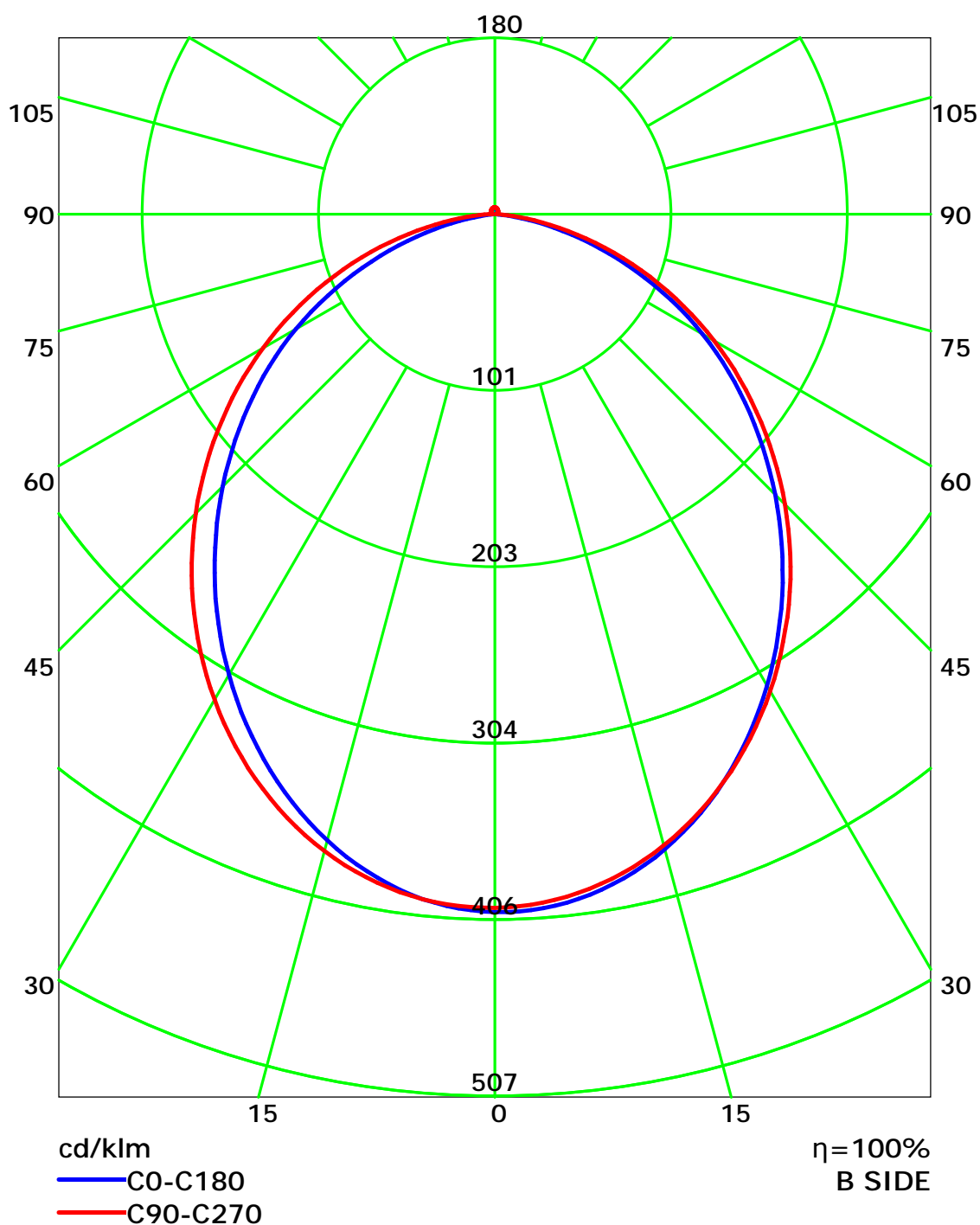
Luminous Intensity Distribution Curve



C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Luminous Intensity Distribution Curve(cd/klm)



C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

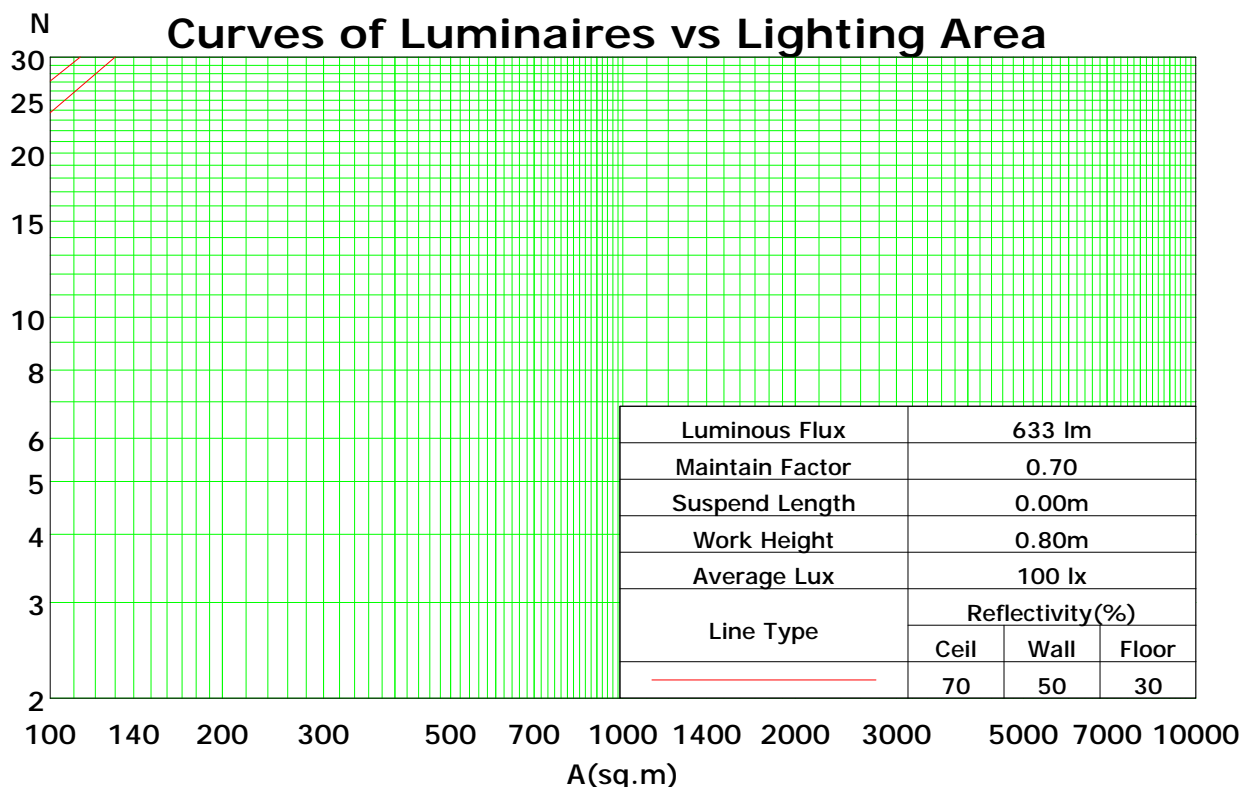
Coefficients Of Utilization - Zonal Cavity Method

| | | | | | | | | | | | | | | | | | | |
|-----|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| RC | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0 |
| RW | 0.7 | 0.5 | 0.3 | 0.1 | 0.7 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0.5 | 0.3 | 0.1 | 0 |
| RCR | RF = 0.2 | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 110 | 110 | 110 | 105 | 105 | 105 | 101 | 101 | 101 | 99 |
| 1 | 109 | 105 | 101 | 97 | 106 | 102 | 99 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 100 | 92 | 85 | 80 | 97 | 90 | 84 | 79 | 86 | 81 | 77 | 83 | 79 | 75 | 80 | 76 | 73 | 71 |
| 3 | 91 | 81 | 73 | 67 | 89 | 79 | 72 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 66 | 62 | 60 |
| 4 | 84 | 72 | 64 | 57 | 81 | 71 | 63 | 57 | 68 | 61 | 56 | 66 | 60 | 55 | 63 | 58 | 54 | 52 |
| 5 | 77 | 65 | 56 | 50 | 75 | 63 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 57 | 52 | 47 | 45 |
| 6 | 71 | 58 | 50 | 43 | 69 | 57 | 49 | 43 | 55 | 48 | 43 | 54 | 47 | 42 | 52 | 46 | 42 | 40 |
| 7 | 66 | 53 | 45 | 39 | 64 | 52 | 44 | 38 | 51 | 43 | 38 | 49 | 42 | 38 | 48 | 42 | 37 | 35 |
| 8 | 62 | 49 | 40 | 34 | 60 | 48 | 40 | 34 | 46 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 33 | 32 |
| 9 | 58 | 45 | 37 | 31 | 56 | 44 | 36 | 31 | 43 | 36 | 31 | 42 | 35 | 31 | 40 | 35 | 30 | 29 |
| 10 | 54 | 41 | 33 | 28 | 53 | 41 | 33 | 28 | 40 | 33 | 28 | 39 | 32 | 28 | 38 | 32 | 28 | 26 |

Spacing Criteria (0-180): 1.16

Spacing Criteria (90-270): 1.20

Spacing Criteria (Diagonal): 1.28



C Plane (°):0.0-360.0: 30.0

Test Lab:

Test Type: TYPE C

Temperature: 25

Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0

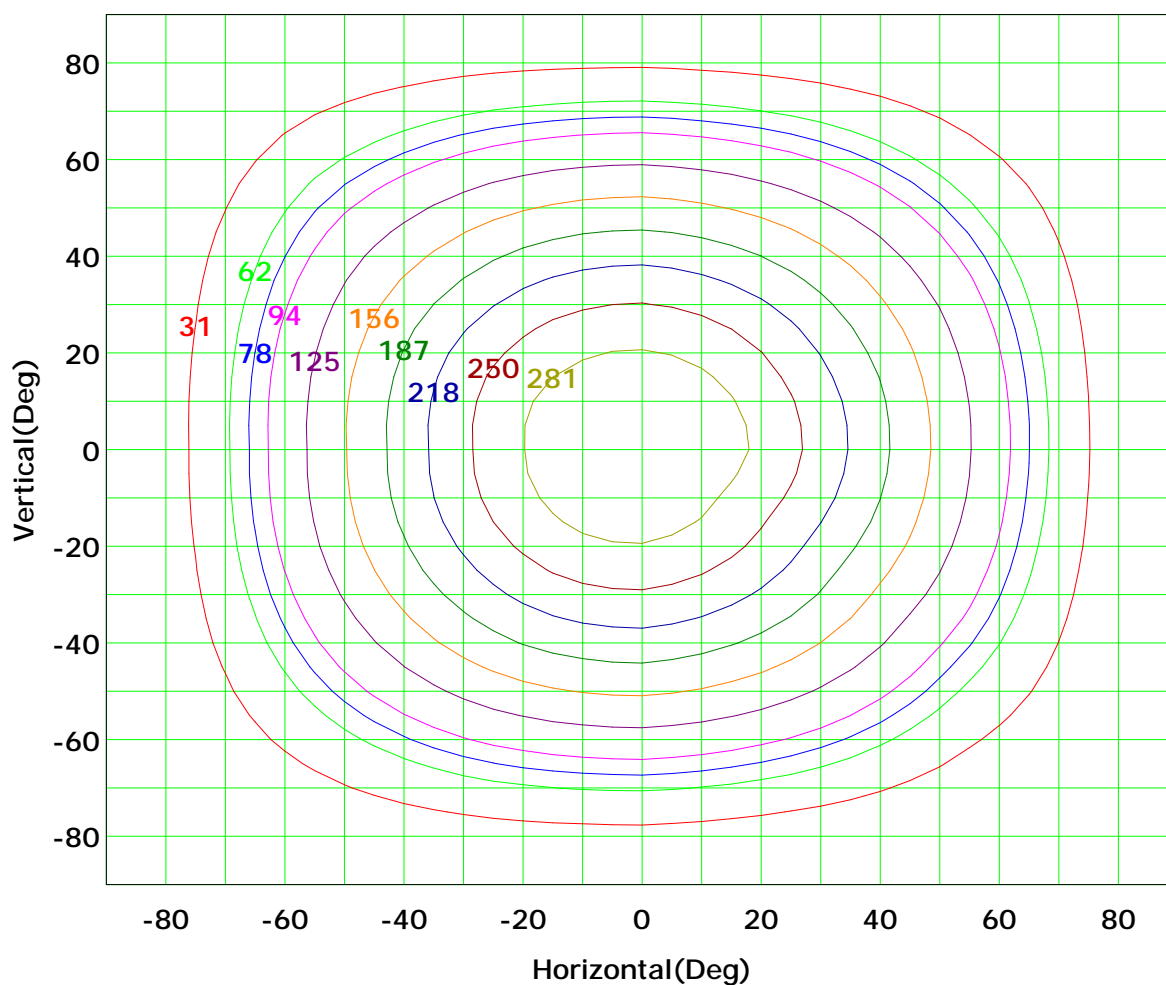
Test Device: GPM-1800B

Distance: 9.028 m

Humidity: 60%

Inspector:

Isocandela (rectangle)



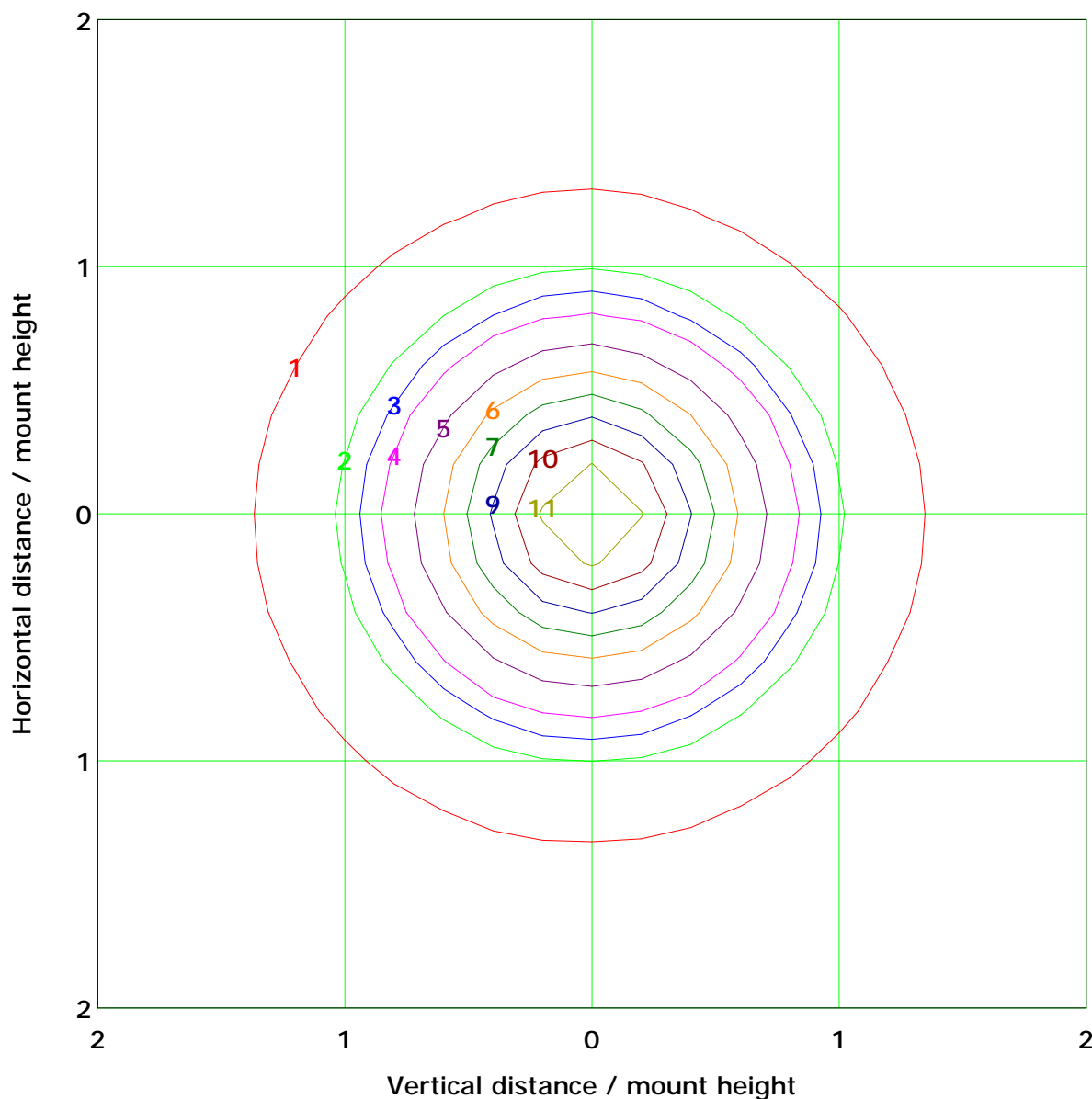
I_{max} (100%): 312 cd

| | |
|----------------|----------------|
| (10%): 31 cd | (20%): 62 cd |
| (25%): 78 cd | (30%): 94 cd |
| (40%): 125 cd | (50%): 156 cd |
| (60%): 187 cd | (70%): 218 cd |
| (80%): 250 cd | (90%): 281 cd |

C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

IsoLux Plot



| | | | |
|-----------------------|---------|------------------------|---------|
| Mounting Height: 5.0m | | Max Lux(100%): 12.5 lx | |
| (10%): | 1.2 lx | (20%): | 2.5 lx |
| (25%): | 3.1 lx | (30%): | 3.7 lx |
| (40%): | 5.0 lx | (50%): | 6.2 lx |
| (60%): | 7.5 lx | (70%): | 8.7 lx |
| (80%): | 10.0 lx | (90%): | 11.2 lx |

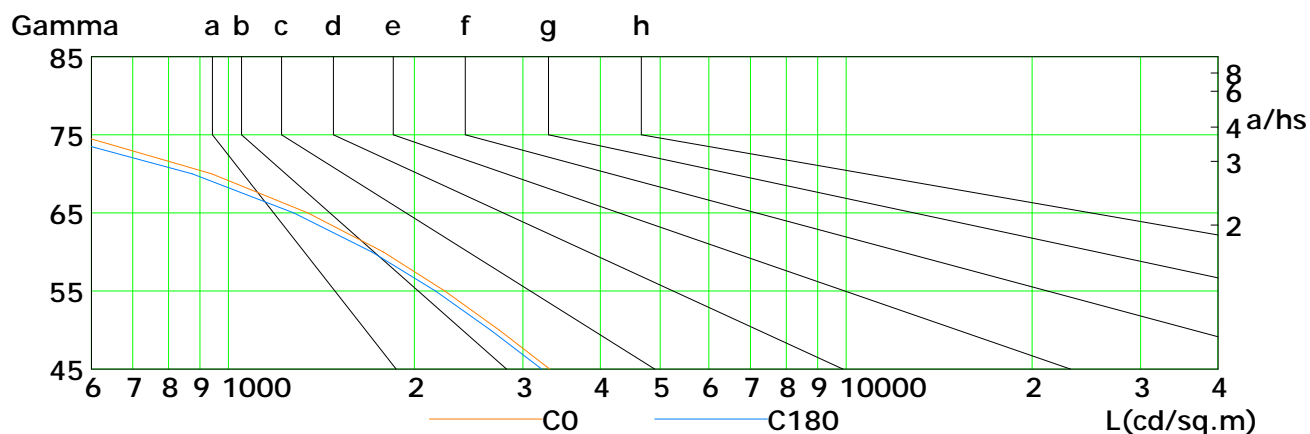
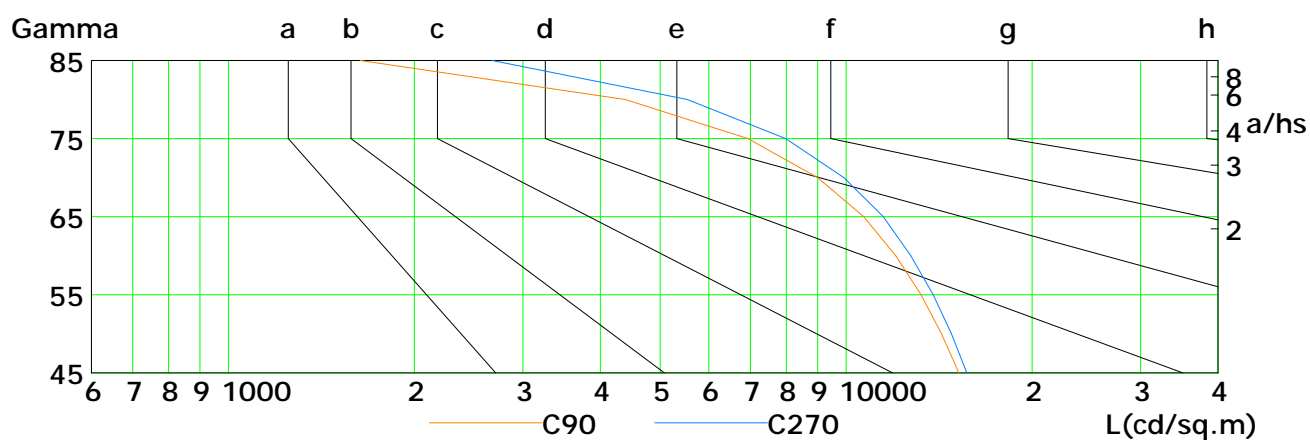
C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Lum Limit Curve

| Dazzle | Quality | Illuminance (lx) | | | | | | | |
|--------|---------|------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.50 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.20 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | | | | | 2000 | 1000 | 500 | <=300 |

a b c d e f g h



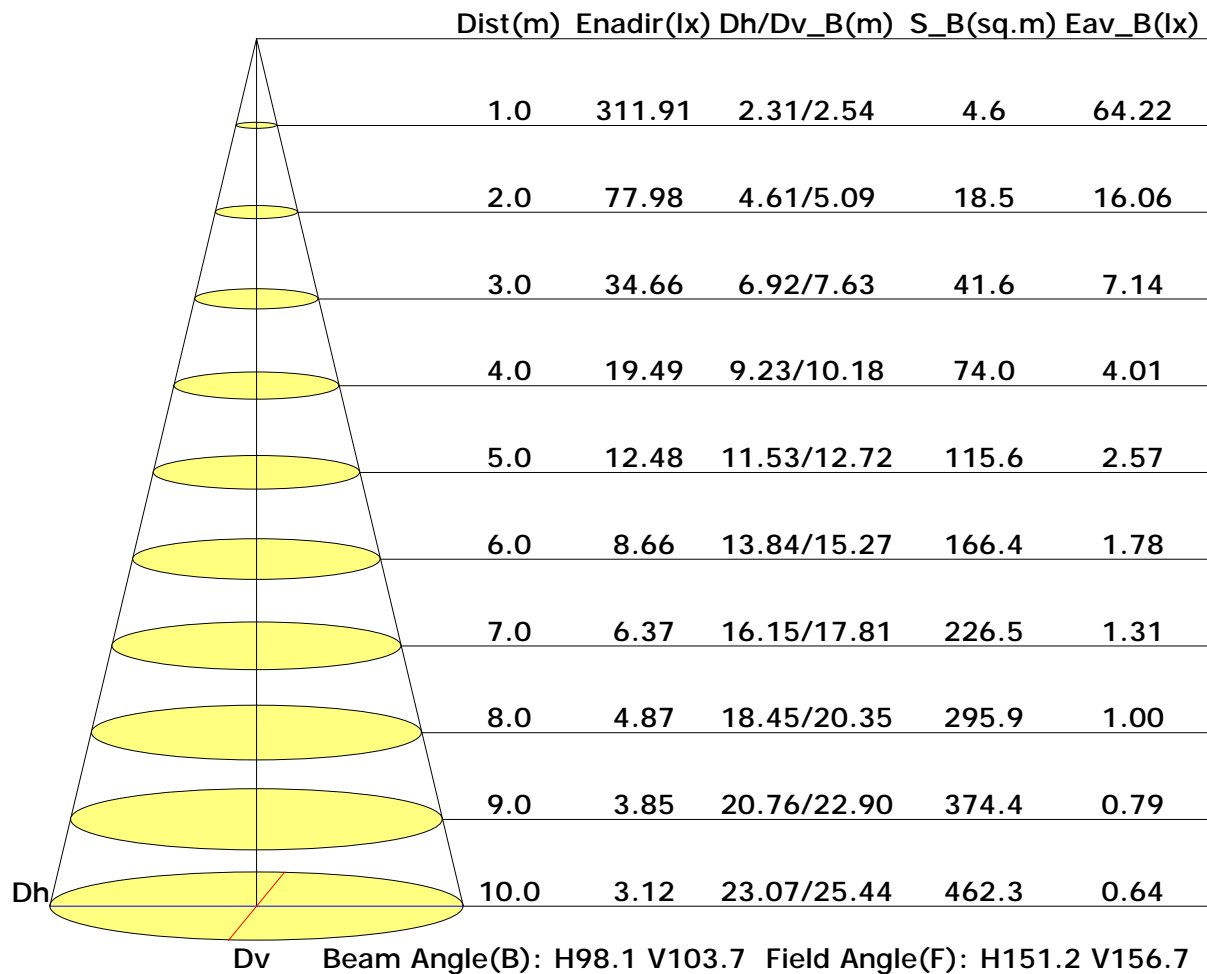
| L(cd/sq.m) | G45 | G50 | G55 | G60 | G65 | G70 | G75 | G80 | G85 |
|------------|-------|-------|-------|-------|-------|------|------|------|------|
| C0 | 3315 | 2745 | 2242 | 1782 | 1344 | 940 | 570 | 248 | 26 |
| C90 | 15234 | 14274 | 13231 | 12043 | 10681 | 9000 | 6939 | 4393 | 1636 |
| C180 | 3217 | 2659 | 2164 | 1708 | 1277 | 874 | 512 | 202 | 10 |
| C270 | 15692 | 14807 | 13836 | 12738 | 11487 | 9924 | 7987 | 5534 | 2673 |

C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:



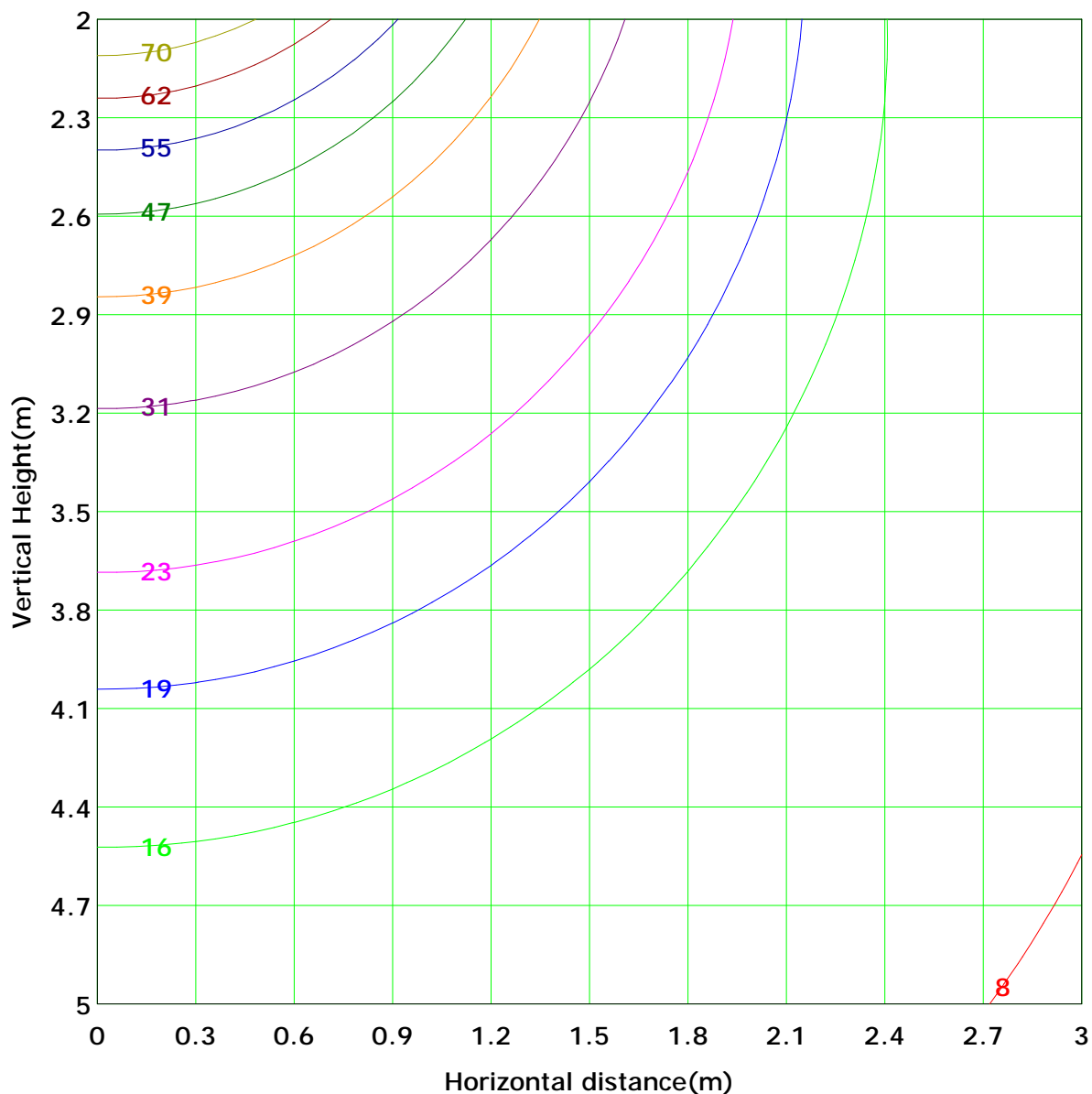
Illuminance at a Distance



C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Vertical IsoLux Plot



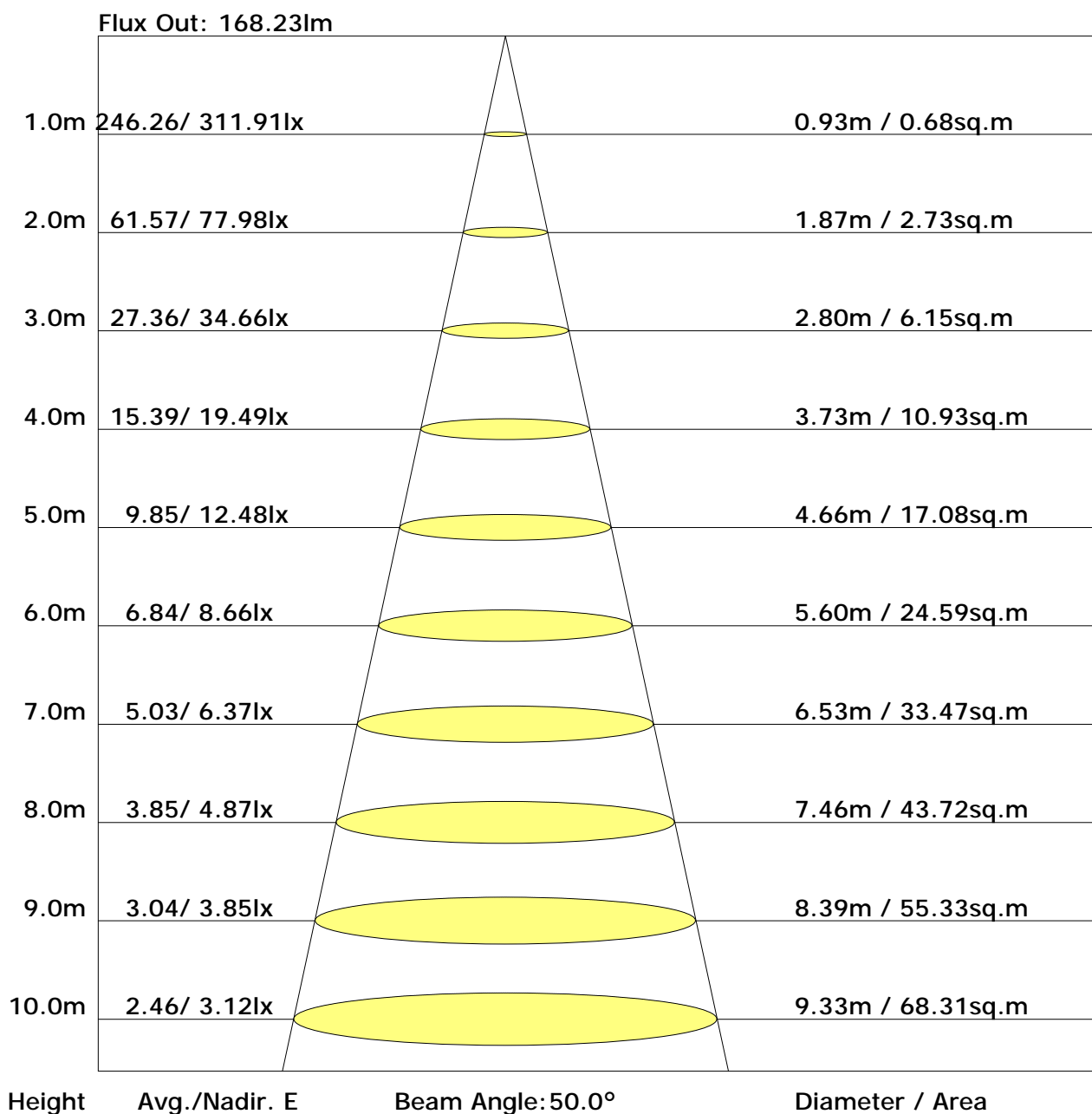
| | | |
|-----------------|------------------|------------------|
| Lowest(m): 2.0m | Highest(m): 5.0m | Max Lux: 78.0 lx |
| (10%): 7.8 lx | (20%): 15.6 lx | |
| (25%): 19.5 lx | (30%): 23.4 lx | |
| (40%): 31.2 lx | (50%): 39.0 lx | |
| (60%): 46.8 lx | (70%): 54.6 lx | |
| (80%): 62.4 lx | (90%): 70.2 lx | |

C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

The Average Illuminance Effective Figure



C Plane (°): 0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

UGR Table

| | | | | | | | | | | |
|------------------|------------------|------|------|------|------|----------------|------|------|------|------|
| Reflectance: | | | | | | | | | | |
| Ceiling (cavity) | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 |
| Wall | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.3 | 0.3 |
| Reference plane | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Room dimensions | Viewed crosswise | | | | | Viewed endwise | | | | |
| X=2H Y=2H | 18.3 | 19.8 | 18.7 | 20.2 | 20.5 | 15.5 | 17.1 | 15.9 | 17.4 | 17.8 |
| 3H | 19.7 | 21.1 | 20.1 | 21.5 | 21.9 | 16.6 | 18.0 | 17.0 | 18.4 | 18.8 |
| 4H | 20.1 | 21.4 | 20.5 | 21.8 | 22.2 | 16.9 | 18.2 | 17.3 | 18.6 | 19.0 |
| 6H | 20.3 | 21.5 | 20.7 | 21.9 | 22.3 | 17.0 | 18.2 | 17.4 | 18.6 | 19.0 |
| 8H | 20.3 | 21.5 | 20.8 | 21.9 | 22.3 | 17.0 | 18.1 | 17.4 | 18.6 | 19.0 |
| 12H | 20.3 | 21.4 | 20.7 | 21.8 | 22.3 | 17.0 | 18.1 | 17.4 | 18.5 | 18.9 |
| X=4H Y=2H | 18.5 | 19.8 | 18.9 | 20.2 | 20.6 | 16.0 | 17.3 | 16.5 | 17.7 | 18.1 |
| 3H | 20.0 | 21.1 | 20.5 | 21.5 | 22.0 | 17.3 | 18.4 | 17.7 | 18.8 | 19.2 |
| 4H | 20.5 | 21.5 | 21.0 | 21.9 | 22.4 | 17.6 | 18.6 | 18.1 | 19.0 | 19.5 |
| 6H | 20.7 | 21.6 | 21.2 | 22.1 | 22.5 | 17.7 | 18.6 | 18.2 | 19.1 | 19.6 |
| 8H | 20.7 | 21.5 | 21.2 | 22.0 | 22.5 | 17.7 | 18.5 | 18.2 | 19.0 | 19.5 |
| 12H | 20.7 | 21.4 | 21.2 | 21.9 | 22.4 | 17.7 | 18.4 | 18.2 | 18.9 | 19.5 |
| X=8H Y=4H | 20.5 | 21.3 | 21.0 | 21.8 | 22.3 | 17.7 | 18.5 | 18.2 | 19.0 | 19.5 |
| 6H | 20.8 | 21.4 | 21.3 | 21.9 | 22.5 | 17.9 | 18.5 | 18.4 | 19.0 | 19.6 |
| 8H | 20.8 | 21.4 | 21.3 | 21.9 | 22.4 | 17.9 | 18.5 | 18.4 | 19.0 | 19.5 |
| 12H | 20.8 | 21.3 | 21.3 | 21.8 | 22.4 | 17.9 | 18.4 | 18.4 | 18.9 | 19.5 |
| X=12H Y=4H | 20.5 | 21.2 | 21.0 | 21.7 | 22.2 | 17.7 | 18.4 | 18.2 | 18.9 | 19.4 |
| 6H | 20.8 | 21.3 | 21.3 | 21.8 | 22.4 | 17.9 | 18.5 | 18.4 | 18.9 | 19.5 |
| 8H | 20.8 | 21.3 | 21.3 | 21.8 | 22.4 | 17.9 | 18.4 | 18.4 | 18.9 | 19.5 |

Calculate in accordance with CIE 190:2010

C Plane (°):0.0-360.0: 30.0
Test Lab:
Test Type: TYPE C
Temperature: 25
Operator: Jacky

Gamma Plane (°):0.0-180.0:1.0
Test Device: GPM-1800B
Distance: 9.028 m
Humidity: 60%
Inspector:

Utilisation Factor Table(Floor cavity)

| Utilisation Factors UF(F) | | | SHR NOM = 1.25 | | | | | | | | |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|
| Room Reflectance | | | Room Index(RI) | | | | | | | | |
| Ceiling | Wall | Floor | 0.75 | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 |
| 0.70 | 0.50 | 0.20 | 0.59 | 0.69 | 0.77 | 0.82 | 0.89 | 0.94 | 0.97 | 1.01 | 1.04 |
| | 0.30 | | 0.52 | 0.62 | 0.70 | 0.75 | 0.83 | 0.88 | 0.92 | 0.98 | 1.01 |
| | 0.20 | | 0.46 | 0.56 | 0.64 | 0.70 | 0.78 | 0.84 | 0.88 | 0.94 | 0.98 |
| 0.50 | 0.50 | 0.20 | 0.57 | 0.67 | 0.74 | 0.79 | 0.86 | 0.90 | 0.93 | 0.97 | 1.00 |
| | 0.30 | | 0.51 | 0.61 | 0.68 | 0.73 | 0.81 | 0.86 | 0.89 | 0.94 | 0.97 |
| | 0.20 | | 0.46 | 0.56 | 0.63 | 0.69 | 0.76 | 0.82 | 0.86 | 0.91 | 0.95 |
| 0.30 | 0.50 | 0.20 | 0.56 | 0.65 | 0.72 | 0.76 | 0.82 | 0.87 | 0.90 | 0.93 | 0.96 |
| | 0.30 | | 0.50 | 0.60 | 0.66 | 0.71 | 0.78 | 0.83 | 0.86 | 0.91 | 0.93 |
| | 0.20 | | 0.45 | 0.55 | 0.62 | 0.67 | 0.75 | 0.80 | 0.84 | 0.88 | 0.91 |
| 0.00 | 0.00 | 0.00 | 0.43 | 0.53 | 0.59 | 0.64 | 0.71 | 0.76 | 0.79 | 0.84 | 0.86 |
| Rating: 23W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 | | | | | | | | | | | |

Utilisation Factor Table(Wall)

| Utilisation Factors UF(W) | | | SHR NOM = 1.25 | | | | | | | | | |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| Room Reflectance | | | Room Index(RI) | | | | | | | | | |
| Ceiling | Wall | Floor | 0.75 | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 | |
| 0.70 | 0.50 | 0.20 | 0.95 | 0.78 | 0.66 | 0.57 | 0.45 | 0.37 | 0.32 | 0.24 | 0.20 | |
| | 0.30 | | 0.80 | 0.67 | 0.58 | 0.51 | 0.41 | 0.34 | 0.29 | 0.23 | 0.19 | |
| | 0.20 | | 0.68 | 0.58 | 0.51 | 0.46 | 0.37 | 0.32 | 0.27 | 0.22 | 0.18 | |
| 0.50 | 0.50 | 0.20 | 0.92 | 0.75 | 0.63 | 0.55 | 0.43 | 0.39 | 0.30 | 0.23 | 0.19 | |
| | 0.30 | | 0.78 | 0.65 | 0.56 | 0.49 | 0.39 | 0.33 | 0.28 | 0.22 | 0.18 | |
| | 0.20 | | 0.67 | 0.57 | 0.50 | 0.44 | 0.36 | 0.31 | 0.27 | 0.21 | 0.17 | |
| 0.30 | 0.50 | 0.20 | 0.89 | 0.72 | 0.60 | 0.52 | 0.41 | 0.34 | 0.29 | 0.22 | 0.18 | |
| | 0.30 | | 0.76 | 0.63 | 0.54 | 0.47 | 0.38 | 0.32 | 0.27 | 0.21 | 0.17 | |
| | 0.20 | | 0.66 | 0.56 | 0.49 | 0.43 | 0.35 | 0.30 | 0.25 | 0.20 | 0.16 | |
| 0.00 | 0.00 | 0.00 | 0.56 | 0.46 | 0.39 | 0.34 | 0.27 | 0.23 | 0.19 | 0.15 | 0.12 | |
| Rating: 23W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 | | | | | | | | | | | | |

Utilisation Factor Table(Ceiling cavity)

| Utilisation Factors UF(C) | | | SHR NOM = 1.25 | | | | | | | | | |
|--|------|-------|----------------|------|------|------|------|------|------|------|------|--|
| Room Reflectance | | | Room Index(RI) | | | | | | | | | |
| Ceiling | Wall | Floor | 0.75 | 1.00 | 1.25 | 1.50 | 2.00 | 2.50 | 3.00 | 4.00 | 5.00 | |
| 0.70 | 0.50 | 0.20 | 0.17 | 0.19 | 0.19 | 0.20 | 0.21 | 0.22 | 0.22 | 0.23 | 0.23 | |
| | 0.30 | | 0.11 | 0.12 | 0.14 | 0.15 | 0.16 | 0.18 | 0.19 | 0.20 | 0.21 | |
| | 0.20 | | 0.06 | 0.08 | 0.09 | 0.11 | 0.13 | 0.14 | 0.15 | 0.17 | 0.18 | |
| 0.50 | 0.50 | 0.20 | 0.17 | 0.18 | 0.19 | 0.19 | 0.20 | 0.21 | 0.21 | 0.22 | 0.22 | |
| | 0.30 | | 0.11 | 0.12 | 0.13 | 0.14 | 0.16 | 0.17 | 0.18 | 0.19 | 0.20 | |
| | 0.20 | | 0.06 | 0.08 | 0.09 | 0.10 | 0.12 | 0.14 | 0.15 | 0.17 | 0.18 | |
| 0.30 | 0.50 | 0.20 | 0.16 | 0.17 | 0.18 | 0.19 | 0.19 | 0.20 | 0.20 | 0.21 | 0.21 | |
| | 0.30 | | 0.10 | 0.12 | 0.13 | 0.14 | 0.15 | 0.17 | 0.17 | 0.18 | 0.19 | |
| | 0.20 | | 0.06 | 0.08 | 0.09 | 0.10 | 0.12 | 0.14 | 0.15 | 0.16 | 0.17 | |
| 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | |
| Rating: 23W Photometrically tested without ceiling board. Multiply UF values by service correction factors Calculate in accordance with CIBSE Technical Memorandum NO.5 1980 | | | | | | | | | | | | |

Zonal Lumen

| Gamma [°] | I _{mean} [cd] | Zonal Flux [lm] | Sum Zonal Flux [lm] | Rel Zonal Flux [%] | Sum Rel Zonal Flux [%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 0.0-1.0 | 310.3 | 0.3 | 0.3 | 0.04 | 0.04 |
| 1.0-2.0 | 310.1 | 0.9 | 1.2 | 0.11 | 0.15 |
| 2.0-3.0 | 309.8 | 1.5 | 2.7 | 0.19 | 0.34 |
| 3.0-4.0 | 309.3 | 2.1 | 4.7 | 0.27 | 0.61 |
| 4.0-5.0 | 308.6 | 2.7 | 7.4 | 0.34 | 0.95 |
| 5.0-6.0 | 307.8 | 3.2 | 10.6 | 0.42 | 1.37 |
| 6.0-7.0 | 306.8 | 3.8 | 14.4 | 0.49 | 1.86 |
| 7.0-8.0 | 305.6 | 4.4 | 18.8 | 0.56 | 2.42 |
| 8.0-9.0 | 304.3 | 4.9 | 23.7 | 0.64 | 3.06 |
| 9.0-10.0 | 302.8 | 5.5 | 29.2 | 0.71 | 3.76 |
| 10.0-11.0 | 301.2 | 6.0 | 35.2 | 0.78 | 4.54 |
| 11.0-12.0 | 299.4 | 6.5 | 41.8 | 0.84 | 5.38 |
| 12.0-13.0 | 297.5 | 7.1 | 48.8 | 0.91 | 6.29 |
| 13.0-14.0 | 295.4 | 7.6 | 56.4 | 0.97 | 7.26 |
| 14.0-15.0 | 293.2 | 8.1 | 64.5 | 1.04 | 8.30 |
| 15.0-16.0 | 290.8 | 8.5 | 73.0 | 1.10 | 9.40 |
| 16.0-17.0 | 288.3 | 9.0 | 82.0 | 1.16 | 10.56 |
| 17.0-18.0 | 285.7 | 9.4 | 91.4 | 1.21 | 11.77 |
| 18.0-19.0 | 283.0 | 9.8 | 101.2 | 1.27 | 13.04 |
| 19.0-20.0 | 280.1 | 10.3 | 111.5 | 1.32 | 14.36 |
| 20.0-21.0 | 277.1 | 10.6 | 122.1 | 1.37 | 15.73 |
| 21.0-22.0 | 274.1 | 11.0 | 133.1 | 1.42 | 17.15 |
| 22.0-23.0 | 270.9 | 11.4 | 144.5 | 1.46 | 18.61 |
| 23.0-24.0 | 267.6 | 11.7 | 156.2 | 1.51 | 20.12 |
| 24.0-25.0 | 264.2 | 12.0 | 168.2 | 1.55 | 21.66 |
| 25.0-26.0 | 260.7 | 12.3 | 180.5 | 1.58 | 23.25 |
| 26.0-27.0 | 257.1 | 12.6 | 193.1 | 1.62 | 24.87 |
| 27.0-28.0 | 253.4 | 12.8 | 205.9 | 1.65 | 26.52 |
| 28.0-29.0 | 249.7 | 13.1 | 219.0 | 1.68 | 28.20 |
| 29.0-30.0 | 245.9 | 13.3 | 232.3 | 1.71 | 29.91 |
| 30.0-31.0 | 242.0 | 13.5 | 245.8 | 1.73 | 31.65 |
| 31.0-32.0 | 238.1 | 13.6 | 259.4 | 1.76 | 33.41 |
| 32.0-33.0 | 234.1 | 13.8 | 273.2 | 1.78 | 35.18 |
| 33.0-34.0 | 229.9 | 13.9 | 287.1 | 1.79 | 36.97 |
| 34.0-35.0 | 225.8 | 14.0 | 301.1 | 1.81 | 38.78 |
| 35.0-36.0 | 221.7 | 14.1 | 315.2 | 1.82 | 40.60 |

C Plane (°): 0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Zonal Lumen (Continue 1)

| Gamma [°] | I _{mean} [cd] | Zonal Flux [lm] | Sum Zonal Flux [lm] | Rel Zonal Flux [%] | Sum Rel Zonal Flux [%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 36.0-37.0 | 217.5 | 14.2 | 329.4 | 1.83 | 42.43 |
| 37.0-38.0 | 213.2 | 14.2 | 343.7 | 1.83 | 44.26 |
| 38.0-39.0 | 208.9 | 14.3 | 357.9 | 1.84 | 46.09 |
| 39.0-40.0 | 204.5 | 14.3 | 372.2 | 1.84 | 47.93 |
| 40.0-41.0 | 200.1 | 14.3 | 386.4 | 1.84 | 49.77 |
| 41.0-42.0 | 195.7 | 14.2 | 400.7 | 1.83 | 51.60 |
| 42.0-43.0 | 191.3 | 14.2 | 414.8 | 1.82 | 53.42 |
| 43.0-44.0 | 186.8 | 14.1 | 428.9 | 1.82 | 55.24 |
| 44.0-45.0 | 182.3 | 14.0 | 442.9 | 1.80 | 57.04 |
| 45.0-46.0 | 177.8 | 13.9 | 456.8 | 1.79 | 58.83 |
| 46.0-47.0 | 173.2 | 13.8 | 470.6 | 1.77 | 60.61 |
| 47.0-48.0 | 168.6 | 13.6 | 484.3 | 1.76 | 62.36 |
| 48.0-49.0 | 164.1 | 13.5 | 497.7 | 1.74 | 64.10 |
| 49.0-50.0 | 159.5 | 13.3 | 511.0 | 1.71 | 65.81 |
| 50.0-51.0 | 154.9 | 13.1 | 524.1 | 1.69 | 67.50 |
| 51.0-52.0 | 150.2 | 12.9 | 537.0 | 1.66 | 69.16 |
| 52.0-53.0 | 145.6 | 12.7 | 549.7 | 1.63 | 70.79 |
| 53.0-54.0 | 140.9 | 12.4 | 562.1 | 1.60 | 72.39 |
| 54.0-55.0 | 136.3 | 12.2 | 574.3 | 1.57 | 73.96 |
| 55.0-56.0 | 131.7 | 11.9 | 586.2 | 1.53 | 75.49 |
| 56.0-57.0 | 127.0 | 11.6 | 597.8 | 1.50 | 76.99 |
| 57.0-58.0 | 122.3 | 11.3 | 609.1 | 1.46 | 78.44 |
| 58.0-59.0 | 117.6 | 11.0 | 620.1 | 1.42 | 79.86 |
| 59.0-60.0 | 112.9 | 10.7 | 630.8 | 1.37 | 81.23 |
| 60.0-61.0 | 108.1 | 10.3 | 641.1 | 1.33 | 82.56 |
| 61.0-62.0 | 103.4 | 10.0 | 651.1 | 1.28 | 83.85 |
| 62.0-63.0 | 98.7 | 9.6 | 660.7 | 1.24 | 85.08 |
| 63.0-64.0 | 93.8 | 9.2 | 669.9 | 1.19 | 86.27 |
| 64.0-65.0 | 89.1 | 8.8 | 678.7 | 1.14 | 87.40 |
| 65.0-66.0 | 84.3 | 8.4 | 687.1 | 1.08 | 88.49 |
| 66.0-67.0 | 79.4 | 8.0 | 695.1 | 1.03 | 89.51 |
| 67.0-68.0 | 74.6 | 7.6 | 702.6 | 0.97 | 90.49 |
| 68.0-69.0 | 69.9 | 7.1 | 709.8 | 0.92 | 91.41 |
| 69.0-70.0 | 65.1 | 6.7 | 716.5 | 0.86 | 92.27 |
| 70.0-71.0 | 60.4 | 6.2 | 722.7 | 0.80 | 93.07 |
| 71.0-72.0 | 55.7 | 5.8 | 728.5 | 0.75 | 93.82 |

C Plane (°): 0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Zonal Lumen (Continue 2)

| Gamma [°] | I _{mean} [cd] | Zonal Flux [lm] | Sum Zonal Flux [lm] | Rel Zonal Flux [%] | Sum Rel Zonal Flux [%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 72.0-73.0 | 51.1 | 5.3 | 733.8 | 0.69 | 94.51 |
| 73.0-74.0 | 46.5 | 4.9 | 738.7 | 0.63 | 95.13 |
| 74.0-75.0 | 41.9 | 4.4 | 743.2 | 0.57 | 95.71 |
| 75.0-76.0 | 37.4 | 4.0 | 747.1 | 0.51 | 96.22 |
| 76.0-77.0 | 33.0 | 3.5 | 750.6 | 0.45 | 96.67 |
| 77.0-78.0 | 28.8 | 3.1 | 753.7 | 0.40 | 97.07 |
| 78.0-79.0 | 24.8 | 2.7 | 756.4 | 0.34 | 97.41 |
| 79.0-80.0 | 20.8 | 2.2 | 758.6 | 0.29 | 97.70 |
| 80.0-81.0 | 17.1 | 1.9 | 760.5 | 0.24 | 97.94 |
| 81.0-82.0 | 13.7 | 1.5 | 762.0 | 0.19 | 98.13 |
| 82.0-83.0 | 10.5 | 1.1 | 763.1 | 0.15 | 98.28 |
| 83.0-84.0 | 7.6 | 0.8 | 764.0 | 0.11 | 98.38 |
| 84.0-85.0 | 5.2 | 0.6 | 764.5 | 0.07 | 98.46 |
| 85.0-86.0 | 3.3 | 0.4 | 764.9 | 0.05 | 98.51 |
| 86.0-87.0 | 2.0 | 0.2 | 765.1 | 0.03 | 98.53 |
| 87.0-88.0 | 1.3 | 0.1 | 765.3 | 0.02 | 98.55 |
| 88.0-89.0 | 0.9 | 0.1 | 765.4 | 0.01 | 98.56 |
| 89.0-90.0 | 0.8 | 0.1 | 765.4 | 0.01 | 98.58 |
| 90.0-91.0 | 0.8 | 0.1 | 765.5 | 0.01 | 98.59 |
| 91.0-92.0 | 0.8 | 0.1 | 765.6 | 0.01 | 98.60 |
| 92.0-93.0 | 0.8 | 0.1 | 765.7 | 0.01 | 98.61 |
| 93.0-94.0 | 0.9 | 0.1 | 765.8 | 0.01 | 98.62 |
| 94.0-95.0 | 0.9 | 0.1 | 765.9 | 0.01 | 98.64 |
| 95.0-96.0 | 0.9 | 0.1 | 766.0 | 0.01 | 98.65 |
| 96.0-97.0 | 0.9 | 0.1 | 766.1 | 0.01 | 98.66 |
| 97.0-98.0 | 1.0 | 0.1 | 766.2 | 0.01 | 98.67 |
| 98.0-99.0 | 1.0 | 0.1 | 766.3 | 0.01 | 98.69 |
| 99.0-100.0 | 1.0 | 0.1 | 766.4 | 0.01 | 98.70 |
| 100.0-101.0 | 1.0 | 0.1 | 766.5 | 0.01 | 98.72 |
| 101.0-102.0 | 1.1 | 0.1 | 766.7 | 0.01 | 98.73 |
| 102.0-103.0 | 1.1 | 0.1 | 766.8 | 0.02 | 98.75 |
| 103.0-104.0 | 1.1 | 0.1 | 766.9 | 0.02 | 98.76 |
| 104.0-105.0 | 1.2 | 0.1 | 767.0 | 0.02 | 98.78 |
| 105.0-106.0 | 1.2 | 0.1 | 767.1 | 0.02 | 98.79 |
| 106.0-107.0 | 1.2 | 0.1 | 767.3 | 0.02 | 98.81 |
| 107.0-108.0 | 1.2 | 0.1 | 767.4 | 0.02 | 98.83 |

C Plane (°): 0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Zonal Lumen (Continue 3)

| Gamma [°] | I _{mean} [cd] | Zonal Flux [lm] | Sum Zonal Flux [lm] | Rel Zonal Flux [%] | Sum Rel Zonal Flux [%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 108.0-109.0 | 1.3 | 0.1 | 767.5 | 0.02 | 98.84 |
| 109.0-110.0 | 1.3 | 0.1 | 767.7 | 0.02 | 98.86 |
| 110.0-111.0 | 1.3 | 0.1 | 767.8 | 0.02 | 98.88 |
| 111.0-112.0 | 1.4 | 0.1 | 767.9 | 0.02 | 98.90 |
| 112.0-113.0 | 1.4 | 0.1 | 768.1 | 0.02 | 98.92 |
| 113.0-114.0 | 1.4 | 0.1 | 768.2 | 0.02 | 98.94 |
| 114.0-115.0 | 1.5 | 0.1 | 768.4 | 0.02 | 98.95 |
| 115.0-116.0 | 1.5 | 0.1 | 768.5 | 0.02 | 98.97 |
| 116.0-117.0 | 1.6 | 0.2 | 768.7 | 0.02 | 98.99 |
| 117.0-118.0 | 1.6 | 0.2 | 768.8 | 0.02 | 99.01 |
| 118.0-119.0 | 1.6 | 0.2 | 769.0 | 0.02 | 99.03 |
| 119.0-120.0 | 1.7 | 0.2 | 769.2 | 0.02 | 99.05 |
| 120.0-121.0 | 1.7 | 0.2 | 769.3 | 0.02 | 99.07 |
| 121.0-122.0 | 1.7 | 0.2 | 769.5 | 0.02 | 99.10 |
| 122.0-123.0 | 1.8 | 0.2 | 769.6 | 0.02 | 99.12 |
| 123.0-124.0 | 1.8 | 0.2 | 769.8 | 0.02 | 99.14 |
| 124.0-125.0 | 1.8 | 0.2 | 770.0 | 0.02 | 99.16 |
| 125.0-126.0 | 1.9 | 0.2 | 770.1 | 0.02 | 99.18 |
| 126.0-127.0 | 1.9 | 0.2 | 770.3 | 0.02 | 99.20 |
| 127.0-128.0 | 1.9 | 0.2 | 770.5 | 0.02 | 99.22 |
| 128.0-129.0 | 2.0 | 0.2 | 770.6 | 0.02 | 99.25 |
| 129.0-130.0 | 2.0 | 0.2 | 770.8 | 0.02 | 99.27 |
| 130.0-131.0 | 2.0 | 0.2 | 771.0 | 0.02 | 99.29 |
| 131.0-132.0 | 2.1 | 0.2 | 771.2 | 0.02 | 99.31 |
| 132.0-133.0 | 2.1 | 0.2 | 771.3 | 0.02 | 99.33 |
| 133.0-134.0 | 2.1 | 0.2 | 771.5 | 0.02 | 99.36 |
| 134.0-135.0 | 2.2 | 0.2 | 771.7 | 0.02 | 99.38 |
| 135.0-136.0 | 2.2 | 0.2 | 771.8 | 0.02 | 99.40 |
| 136.0-137.0 | 2.2 | 0.2 | 772.0 | 0.02 | 99.42 |
| 137.0-138.0 | 2.3 | 0.2 | 772.2 | 0.02 | 99.44 |
| 138.0-139.0 | 2.3 | 0.2 | 772.3 | 0.02 | 99.47 |
| 139.0-140.0 | 2.3 | 0.2 | 772.5 | 0.02 | 99.49 |
| 140.0-141.0 | 2.4 | 0.2 | 772.7 | 0.02 | 99.51 |
| 141.0-142.0 | 2.4 | 0.2 | 772.8 | 0.02 | 99.53 |
| 142.0-143.0 | 2.4 | 0.2 | 773.0 | 0.02 | 99.55 |
| 143.0-144.0 | 2.5 | 0.2 | 773.2 | 0.02 | 99.57 |

C Plane (°): 0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Jacky

Gamma Plane (°): 0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector:

Zonal Lumen (Continue 4)

| Gamma [°] | I _{mean} [cd] | Zonal Flux [lm] | Sum Zonal Flux [lm] | Rel Zonal Flux [%] | Sum Rel Zonal Flux [%] |
|--------------|---------------------------|--------------------|------------------------|-----------------------|---------------------------|
| 144.0-145.0 | 2.5 | 0.2 | 773.3 | 0.02 | 99.59 |
| 145.0-146.0 | 2.5 | 0.2 | 773.5 | 0.02 | 99.61 |
| 146.0-147.0 | 2.6 | 0.2 | 773.6 | 0.02 | 99.63 |
| 147.0-148.0 | 2.6 | 0.2 | 773.8 | 0.02 | 99.65 |
| 148.0-149.0 | 2.6 | 0.2 | 773.9 | 0.02 | 99.67 |
| 149.0-150.0 | 2.6 | 0.1 | 774.1 | 0.02 | 99.69 |
| 150.0-151.0 | 2.7 | 0.1 | 774.2 | 0.02 | 99.71 |
| 151.0-152.0 | 2.7 | 0.1 | 774.4 | 0.02 | 99.73 |
| 152.0-153.0 | 2.7 | 0.1 | 774.5 | 0.02 | 99.74 |
| 153.0-154.0 | 2.7 | 0.1 | 774.6 | 0.02 | 99.76 |
| 154.0-155.0 | 2.8 | 0.1 | 774.8 | 0.02 | 99.78 |
| 155.0-156.0 | 2.8 | 0.1 | 774.9 | 0.02 | 99.79 |
| 156.0-157.0 | 2.8 | 0.1 | 775.0 | 0.02 | 99.81 |
| 157.0-158.0 | 2.8 | 0.1 | 775.1 | 0.02 | 99.83 |
| 158.0-159.0 | 2.9 | 0.1 | 775.3 | 0.01 | 99.84 |
| 159.0-160.0 | 2.9 | 0.1 | 775.4 | 0.01 | 99.85 |
| 160.0-161.0 | 2.9 | 0.1 | 775.5 | 0.01 | 99.87 |
| 161.0-162.0 | 2.9 | 0.1 | 775.6 | 0.01 | 99.88 |
| 162.0-163.0 | 2.9 | 0.1 | 775.7 | 0.01 | 99.89 |
| 163.0-164.0 | 2.9 | 0.1 | 775.8 | 0.01 | 99.90 |
| 164.0-165.0 | 3.0 | 0.1 | 775.8 | 0.01 | 99.92 |
| 165.0-166.0 | 3.0 | 0.1 | 775.9 | 0.01 | 99.93 |
| 166.0-167.0 | 3.0 | 0.1 | 776.0 | 0.01 | 99.94 |
| 167.0-168.0 | 3.0 | 0.1 | 776.1 | 0.01 | 99.95 |
| 168.0-169.0 | 3.0 | 0.1 | 776.1 | 0.01 | 99.95 |
| 169.0-170.0 | 3.1 | 0.1 | 776.2 | 0.01 | 99.96 |
| 170.0-171.0 | 3.1 | 0.1 | 776.3 | 0.01 | 99.97 |
| 171.0-172.0 | 3.1 | 0.0 | 776.3 | 0.01 | 99.98 |
| 172.0-173.0 | 3.1 | 0.0 | 776.4 | 0.01 | 99.98 |
| 173.0-174.0 | 3.1 | 0.0 | 776.4 | 0.00 | 99.99 |
| 174.0-175.0 | 3.1 | 0.0 | 776.4 | 0.00 | 99.99 |
| 175.0-176.0 | 3.1 | 0.0 | 776.5 | 0.00 | 99.99 |
| 176.0-177.0 | 3.1 | 0.0 | 776.5 | 0.00 | 100.00 |
| 177.0-178.0 | 3.1 | 0.0 | 776.5 | 0.00 | 100.00 |
| 178.0-179.0 | 3.1 | 0.0 | 776.5 | 0.00 | 100.00 |
| 179.0-180.0 | 3.1 | 0.0 | 776.5 | 0.00 | 100.00 |

C Plane (°):0.0-360.0: 30.0
 Test Lab:
 Test Type: TYPE C
 Temperature: 25
 Operator: Jacky

Gamma Plane (°):0.0-180.0: 1.0
 Test Device: GPM-1800B
 Distance: 9.028 m
 Humidity: 60%
 Inspector: